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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,167	KUBLER ET AL.	
	Examiner	Art Unit	
	Ian N. Moore	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-88* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10-26-06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 22,24,25,28-30,33-39,41,42,45-47,50-58,61,63-66,69-73,76, and 82-86 rejected under 35 U.S.C. 103(a) as being unpatentable over Berken (WO 91/08629) in view of Richter (US006104706A).

Regarding Claims 22, 58, and 63, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has a transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1C, phone interface 209 converts sound/voice input from telephone 127 into digital voice packets) for transmission via the wireless transceiver (see page 6, line 16-20; for transmission via radio antenna), and for receiving digital voice packets via the wireless transceiver (see FIG. 1C, for receiving voice packet from RF channel 107 via radio port), the

contents of the digital voice packet for conversion into sound (see FIG. 1C, phone interface 209 converts digitized voice packets into analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets) for transmission via the wireless transceiver (see FIG. 1C, for transmitting via radio antenna; see page 8, line 8-16), and for receiving data packets via the wireless transceiver (see FIG. 1C, for receiving data packet from RF channel 107 via radio port), the contents of the data packets used for reproducing digital data (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets; see page 7, line 25 to page 8, line 7); and

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the information received from its network interface (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its fiber interface 205 by switching/transferring to radio interface for transmission; page 5, line 1-27; page 7, line 19-24), and

selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its radio interface 115 by switching/transferring to fiber interface 205; see page 4, line 16-24; see page 6, line 21-26); and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN).

Berken does not explicitly disclose destination. However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see

col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by Berken and well established teaching in art in the system of Berken, so that it would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet.

Regarding Claim 39, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has wireless transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital representation of sound (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed voice packets (i.e. of telephone/sound signals); see page 6, line 16-20; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital data (see FIG. 1C, user module exchange/transfers via user module 103's

antenna (i.e. radio transceiver 211) formed data packets (i.e. data signals); see page 7, line 25 to page 8, line 7;

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device adapting one or both of packets comprising digital representation of sound and packets comprising digital data from its wireless transceiver for transmission via designated one of the at least one network interface (see FIG. 1A,B, a node 101 transmits the voice and/or data packet received from a radio transceiver 115 to a designated/assigned/picked network interface fiber 205 (to PSTN, Ethernet, or Token Ring networks); see page 4, line 16-24; see page 6, line 21-26; and

for adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see FIG. 1A,B, a node 101 transmits the

voice and/or data packet received from a designated/assigned/picked network interface 205 via a radio transceiver 115 (to user module); page 5, line 1-27; page 7, line 19-24; and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN).

Berken does not explicitly disclose destination. However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by Berken and well established teaching in art in the system of Berken, so that it would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet.

Regarding Claim 73, Berken discloses one or more circuits for use in a communication device supporting the exchange of voice and data (see FIG. 1A, C, circuits/modules/components of wireless user device for voice and data communication; see page 4, line 6-9), the one or more circuits comprising:

at least one interface to circuitry for wirelessly exchanging (see FIG. 1A, C, Radio interface 211 circuitry/module) one or both of digitized voice packets (see FIG. 1C, transmitting digital voice packets; see page 6, line 16-20) and data packets (see FIG. 1C, transmitting data packets; see page 8, line 8-16) with at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) of a communication network (see FIG. 1A, wireless telecommunication system; see page 4, line 10-25; see page 5, line 1-17) using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure); and

at least one processor (see FIG. 1C, a combined system of processor 215, switch 213, phone 209, terminal 221, LAN 223) operably coupled to the at least one interface (see FIG. 1C, couples to radio interface 211; see page 6, line 14-20; page 7, line 25-32), the at least one processor operable to:

convert an electrical signal representative of sound into digital voice data for wireless transmission as digital voice packets (see FIG. 1C, phone interface 209 converts sound/voice input from telephone 127 into digital voice packets for radio transmission; see page 6, line 16-20), and to convert digital voice data wirelessly received in digital voice packets to an electrical signal representative of sound (see FIG. 1C, phone interface 209 converts digitized

voice packets received from radio interface back into analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5),

capture digital data into data packets for wireless transmission (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets for wireless transmission), and to reproduce digital data from wirelessly received data packets (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets via radio interface; see page 7, line 25 to page 8, line 7), and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN).

Berken does not explicitly disclose destination. However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network

(see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by Berken and well established teaching in art in the system of Berken, so that it would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet.

Regarding Claims 24, 41 and 82, Berken disclose a frequency hopping spread spectrum technique (see page 11, line 20-31; frequency hoping system of spread spectrum coding).

Regarding Claims 25, 42 and 83, Berken disclose a direct sequence spread spectrum technique (see page 11, line 20-31; direct sequence spread spectrum coding).

Regarding Claims 28 and 45, Berken discloses the packets exchanged by the at least one portable terminal comprises digital voice packets and data packets (see page 6, line 16-20; see page 5, line 28 to page 6, line; voice packets and data packets are exchanged).

Regarding Claims 29, 46 and 84, Berken discloses wherein digitized voice packets and data packets are transported wirelessly without regard to content (see page 6, line 16-20; see page 8, line 8-16; voice and data packets are transmitted via radio interface regardless whether it is voice or data packets).

Regarding Claims 30 and 47, Berken disclose the wired network comprises a packet network (see FIG. 1A, see page 9, line 1-10; see page 10, line 17-30; Ethernet LAN, or Token Ring LAN).

Regarding Claims 33,35 and 50, Berken discloses a wired network comprises an Ethernet compliant network line (see FIG. 1A, Ethernet LAN; see page 9, line 1-10; see page 10, line 17-30).

Regarding Claims 34,51, 52 and 64, Berken discloses the wired network is a conventional switched telephone network (see FIG. 1A, PSTN 151; see page 9, line 1-10; see page 10, line 17-30), wherein the network interface communication via using digital information (see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22; transmission digital information over PSTN).

Regarding Claims 36 and 53, Berken discloses the communication network supports the established of voice calls by the at least one portable terminal via the wired network (see FIG. 1A, PSTN, Ethernet or Token Ring networks; see page 9, line 1-10; see page 10, line 17-30).

Regarding Claims 37 and 54, Berken discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22; the radio network receives voice calls via PSTN, Ethernet or Token Ring network).

Regarding Claims 38 and 55, Berken discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see FIG. 1A; see page 7, line 25 to page 8, line 7; data packets carry actual data, not the management of voice calls which is related to a voice call).

Regarding Claim 56, Berken discloses wherein the designated one of the at least one network interface is designated based upon information received via the wireless transceiver (see

FIG. 1B, packet switch 111 of the node 101 designates a fiber port 205 for PSTN or Ethernet based upon received information from radio interface 115; page 5, line 1-27; page 7, line 19-24).

Regarding Claim 57, Berken discloses wherein the designated one of the at least one network interface is designated based upon information received via the network interface (see FIG. 1B, packet switch 111 of the node 101 designates a fiber port 205 for PSTN or Ethernet based upon received information page 5, line 1-27; page 7, line 19-24).

Regarding Claim 61, Berken discloses wherein the at least one access device comprises a network interface circuit that communicates using a packet protocol (see FIG. 1A-B, a network interface of node 101 uses Ethernet LAN 143 or Token Ring LAN 145; see page 4, line 16-25; see page 7, line 7-16).

Regarding Claim 65, Berken discloses wherein the network interface is compatible with a conventional analog loop connection (see FIG. 1A, B, network interface 141 connecting with PSTN 151; thus, it is clear that PSTN utilizes a conventional analog local loop connection; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24).

Regarding Claim 66 and 76, Berken further discloses wherein the contents of each digital voice packet transmitted wirelessly by a communication device of a first party (see FIG. 1A, voice packet transmitted via radio by the voice telephone 127) is received in a digital voice packet by a destination party (see FIG. 1A,D, subscriber line 141/171, receiving a digital voice packet at subscriber line 171 where a subscriber/destination party is connected).

Regarding Claims 69 and 70, Berken discloses the at least one wireless receiver and the at least one wireless transmitter, wherein the at least one wireless receiver and the at least one

wireless transmitter comprises a signal transceiver (see FIG. 1A,C; radio 211 interface/port which perform both transmitter and receiver functionalities; see page 6, line 14-20).

Regarding Claims 71 and 72, Berken discloses wherein the wireless communication circuitry comprises at least one transceiver, wherein the at least one transceiver comprises a single transceiver (see FIG. 1A,C, radio 211 interface/port which perform both transmitter and receiver functionalities; see page 6, line 14-20).

Regarding Claim 85, the combined system of Berken and Richter discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a network as set forth in claim 73. Richter further discloses teaches routing one of digital voice data or electrical signals representative of sound (see FIG. 7A, Audio data source 702) over a wired network (see FIG. 5, wired local are network such as ISDN or telephone line); see col. 6, line 9-15; see col. 7, line 24-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide caller a wired network, as taught by Richter in the system of Berken, so that it would provide common availability to callers to establish the connection; see Richter col. 6, line 9-15.

Regarding Claim 86, Richter discloses the routing is based upon input of a user of the communication device (see FIG. 1A, 1D, 7A, routing the call is according to input of a caller of the device; see col. 5, line 36-60; see col. 6, line 32-67; col. 7, line 10-40; see col. 8, line 10-23; caller request/input for specific service (i.e. video, audio or text) for routing. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing is based upon input of a user of the communication device, as taught by Richter in the system of Berken, for the same motivation as set forth above in claim 73 and 85.

3. Claims 23,40, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter, and further in view of Cripps (US005838730A).

Regarding Claims 23, 40 and 81, Berken explicitly disclose a frequency of approximately 2.4 gigahertz. However, using 2.4 GHz frequency hopping is well known in the art as defined by FCC. In particular, Cripps discloses wherein the wireless packet network communicates at a frequency of approximately 2.4 gigahertz (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 2.4 GHz, as taught by Cripps, in the combined system of Berken and Richter, so that it would provide a transmitter/receiver in accordance with FCC rules for 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

4. Claims 26,27,31-32,43,44, 48-49,59, 60, 62, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter, and further in view of Perkins (US005159592A).

Regarding Claims 26,27,43,44, 59, 60, 62, 74, and 75, neither Berken nor Richter explicitly discloses a packet Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wireless packet network comprising communication device (see FIG. 2, Mobile Unit MU 10) and the access device (see FIG. 1, a combined system of Header station HS 12 and gateway 16) uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see

col. 4, line 10-20; see col. 7, line 35-56; col. 8, line 30-45; mobile unit 10 and access gateway utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP, as taught by Perkins, in the combined system of Berken, so that it would provide wireless network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

Regarding Claims 31-32 and 48-49, neither Berken nor Richter explicitly discloses the wired network uses an Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 3, line 55-64; col. 4, line 10 to col. 5, line 60; see col. 7, line 5-67; col. 8, line 45-67; Header station couples to a wired packet network utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP in wire network, as taught by Perkins, in the combined system of Berken and Richter, so that it would provide wireless migration users to a network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

5. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter, and further in view of Callon (US005251205A).

Regarding Claim 67, Berken discloses wherein the communication network comprises a plurality of access devices (see page 10, line 20-30; see page 11, line 15-17,29-31; nodes in the network), and routing of digital voice packets between access devices as set forth above in claim 58.

Neither Berken nor Richter explicitly discloses based upon a cost of. However, using a least cost route/path is well known in the art. In particular, Callon discloses wherein the routing is based upon a cost of use of communication path (see FIG. 5A, 8A, 10A; cost; see col. 13, line 14-24;see col. 21, line 21 to col. 22, line 67; also see FIG. 12-13, col. 18-19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing base upon cost, as taught by Callon, in the combined system of Berken and Richter, so that it would help to share network traffic loads between paths; see Callon col. 21, line 50-60.

6. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter, and further in view of Reece (US005915214A).

Regarding Claim 68, the combined system of Berken and Richter discloses using routing information received by the communication device as described above in claim 58. Neither Berken nor Richter explicitly discloses alternate routing. However, user selection alternate routing based upon cost of the service provider is well known in the art.

In particular, Reece discloses a user is prompted to select a routing alternative using routing information received by the communication unit (see FIG. 6, step 640,650,651,661,660,670; see FIG. 7-10; user is prompted with the provider information/cost to select a routing/switch different/alternative using routing/switching information received at the terminal; see col. 12, line 60 to col. 14, line 67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide user selection of alternate routing, as taught by Reece, in the combined system of Berken and Richter, so that it

would allow user to select a different/alternative, lower cost provider to complete the call; see Reece col. 3, line 19-65.

7. Claims 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter and further in view of Lewen (US005341374A).

Regarding Claim 77, the combined system of Berken and Richter discloses wherein the at least one processor received digital voice data and conversion of digital voice data as set forth above in claim 73.

Neither Berken nor Richter explicitly discloses queues received data and delays conversion of queued data for an adjustable period of time. However, Lewen teaches queuing (see FIG. 4, queuing/storing/collecting common memory 80) received digital voice data (see FIG. 2, collect received samples 120; see col. 14, line 44-49) and delays conversion of queued digital voice data for an adjustable period of time (see FIG. 2, delay time for storing/collecting voice samples in the memory before packetizing is adjusted between Tw (walktime) up to Tbfr (buffer storage time)); see col. 15, line 5-9,15-30. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to queue received data and delays conversion of queued data for an adjustable period of time, as taught by Lewen in the combined system of Berken and Richter, so that it would provision a communication system which effectively provides integrated voice, data and video communication and also provide real time reception of voice communication; see Lewen col. 2, line 50-62.

Regarding Claim 78, Lewen further discloses adjusts the period of time based upon a network propagation delay (see col. 13, line 56-66; see col. 14, line 22-39; see col. 15, line 5-

9,15-30; adjusting delay time according Tw (propagation delay)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the period of time based upon a network propagation delay, as taught by Lewen in the combined system of Berken and Richter, for the same motivation as set forth above in claim 77.

Regarding Claim 79, Lewen further discloses adjustable period of time using a packet sent to the communication device in response to a packet sent by the communication device (see col. 13, line 56-66; see col. 14, line 22-39; see col. 15, line 5-9,15-30; adjusting delay time according Tw (propagation delay), which is a time required for a signal bit of a frame/packet to travel from transmitting node to receive node). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide adjustable period of time using a packet sent to the communication device in response to a packet sent by the communication device, as taught by Lewen in the combined system of Berken and Richter, for the same motivation as set forth above in claim 77.

8. Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken, Richter, Lewen as applied to claim 79 above, and further in view of McKee (US005477531A).

Regarding Claim 80, neither Berken, Richter nor Lewen explicitly disclose a test packet. However, McKee discloses determining propagation delay or queuing delay by utilizing in response to test packet sent by the communication device (see FIG. 2, test packet; see col. 1, line 60 to col. 2, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a test packet, as taught by McKee, in the combined system of

Berken, Richter and Lewen, so that it would provide to determine/test propagation delay or queuing delay; see McKee abstract col. 2, line 20-32.

9. Claims 87-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter, and further in view of Focsaneanu (US005610910A).

Regarding Claim 87, the combined system of Berken and Richter discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a network as set forth in claim 73.

Neither Berken nor Richter explicitly discloses a packet network. However, Focsaneanu discloses wherein the wired network is a packet network (see FIG. 7, data/packet switching network 214 utilizing protocols TCP/IP, X.25, ATM ; see col. 7, line 10-20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet network as taught by Focsaneanu in the combined system of Berken and Richter, so that it would provide an intelligent connection to multiple types of service and no-service specific transport networks in multiple protocol environments; see Focsaneanu col. 4, line 10-56.

Regarding Claim 88, the combined system of Berken and Richter discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a telephone line and ISDN network as set forth in claim 73.

Although it is well known that ISDN network is part of the PSTN network, neither Berken nor Richter explicitly discloses PSTN. However, Focsaneanu discloses wherein the wired network is a public switched telephone network (see FIG. 7, PSTN 212; see col. 7, line 10-17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to provide PSTN as taught by Focsaneanu in the combined system of Berken and Richter, so that it would provide an intelligent connection to multiple types of service and no-service specific transport networks in multiple protocol environments; see Focsaneanu col. 4, line 10-56.

Original Rejection

10. Claims 22,28,29,33,35-39,45,46,50,53-58,63,66, and 69-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton (US00RE38787E) in view of Richter.

Regarding Claims 22, 58 and 63, Sainton discloses a communication network supporting the exchange of voice and data (see FIG. 14, cellular telephone system; see col. 5, line 19-32), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities) adapted for communication using a packet protocol (see col. 5, line 19-32; see col. 6, line 21-30; a cellular telephone communicates utilizing frame/packet protocol);

the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1B, microphone 102 and, a combined system of voice processing 104, A/D 108, and modulator 22 (see FIG. 1A)) for transmission via the wireless transceiver (see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25; voice signals are converted to digitized voice packets/frames and transmitted), and for receiving digital voice packets via the wireless transceiver (see FIG. 1A, Antenna 2, Mixer 10; see col. 6, line 21-50), the contents of the digital voice packet for

conversion into sound (see FIG. 1B, speaker 100 and a combined system of voice processing 104, D/A 106, and demodulator 18 (see FIG. 1A); see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25; converts digitized voice packets/frames into voice signals, then to sound);

the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1B, a combined system of Data processing 118 and modulator 24 (see FIG. 1A)) for transmission via the wireless transceiver (see FIG. 1A, Antenna 2, mixer 8, amplifier 6; see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25; data signals are converted to data packets/frames and transmitted), and for receiving data packets via the wireless transceiver (see FIG. 1A, Antenna 2, Mixer 10), the contents of the data packets used for reproducing digital data (see FIG. 1B, a combined system of Data processing 118 and demodulator 20(see FIG. 1A; see col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; converts data packets/frames into data signals); and

at least one access device (see FIG. 14, a base station comprising a Cell site transmitter 1412) having a wireless transceiver (see FIG. 14, base station has a transceiver) for exchanging one or both of digital packets and digital data packets with the at least one portable terminal (see FIG. 14, exchange packets/frame with cellular phone/device 1), the at least one access device comprising a network interface (see FIG. 14, an interface that connects to cellular telephone network office 1402) for exchanging information via a wired network (see FIG. 14, cellular telephone network office connects to the wire network (e.g. PSTN, Internet, Ethernet, or equivalent thereof); see col. 21, line 20-36; see col. 5, line 19-35);

the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the information received from its network interface (see FIG.

14, a base station comprising a Cell site transmitter 1412 selectively, in transmit direction to wireless transceiver, moves/transfer the data packets/frame received from its network interface (via cellular telephone network office); see col. 21, line 20-36), and

selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 14, a base station comprising a Cell site transmitter 1412 selectively, in receive direction from wireless transceiver, moves/transfer the data packets/frame to its network interface (to cellular telephone network office); see col. 21, line 20-36); and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing the digital voice packets through the communication network (see col. 8, line 25 to col. 9, line 25; digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular telephone system).

Sainton does not explicitly disclose destination information.

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by in the system of Sainton, so that it

would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet, and it would ensure the network to route the voice packet to destination end user.

Regarding Claim 39, Sainton discloses a communication network supporting the exchange of voice and data (see FIG. 14, cellular telephone system; see col. 5, line 19-32), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities) adapted for communication using a packet protocol (see col. 5, line 19-32; see col. 6, line 21-30; a cellular telephone communicates utilizing frame/packet protocol);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital representation of sound (see FIG. 1A, a cellular phones exchanges/transfer via a radio transceiver (i.e. FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6) converted digitized voice packets/frames (i.e. of voice/sound signals); see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25;

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital data ((see FIG. 1A, a cellular phones exchanges/transfer via a radio transceiver (i.e. FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6) converted data packets/frame (of data signals)); see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25;

at least one access device (see FIG. 14, a base station comprising a Cell site transmitter 1412) having a wireless transceiver (see FIG. 14, base station has a transceiver) for exchanging one or both of digital packets and digital data packets with the at least one portable terminal (see FIG. 14, exchange packets/frame with cellular phone/device 1), the at least one access device comprising a network interface (see FIG. 14, an interface that connects to cellular telephone network office 1402) for exchanging information via a wired network (see FIG. 14, cellular telephone network office connects to the wire network (e.g. PSTN, Internet, Ethernet, or equivalent thereof); see col. 21, line 20-36; see col. 5, line 19-35);

the at least one access device adapting one or both of packets comprising digital representation of sound and packets comprising digital data from its wireless transceiver for transmission via designated one of the at least one network interface (see FIG. 14, a base station comprising a Cell site transmitter 1412 transmits the voice/data packet/frame received from a combined system of transceiver to a designated/assigned/picked network interface (to cellular telephone network office); see col. 21, line 20-36; and

for adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see FIG. 14, a base station comprising a Cell site transmitter 1412 transmits the voice/data packet/frame received from a designated/assigned/picked network interface via a combined system of transceiver (to cellular phone); see col. 21, line 20-36; and

wherein the packets comprising digital representation of sound also comprises information used for routing the digital voice packets through the communication network (see

col. 8, line 25 to col. 9, line 25; digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular telephone system).

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by in the system of Sainton, so that it would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet, and it would ensure the network to route the voice packet to destination end user.

Regarding Claims 28 and 45, Sainton discloses the packets exchanged by the at least one portable terminal comprises digital voice packets and data packets (see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25; see col. 9, line 25 to col. 10, line 21; digital voice and data frames/packets).

Regarding Claims 29 and 46, Sainton discloses wherein packets are transported wirelessly without regard to content (see FIG. 1A-B; col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; packets are transmitted regardless whether it is voice or data packets).

Regarding Claims 33,35 and 50, the combined system of Sainton and Richter discloses a network interface to a wired network as described above in claims 22 and 39. The combined system of Sainton and Richter wherein the network interface communicates via the wired network in digital form (see Sainton col. 21, line 20-36; see Richter col. 6, line 10-15). Richter further discloses the wired network comprises an Ethernet compliant network (col. 6, line 10-15; Ethernet). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ethernet, as taught by Richter, in the system of Sainton, so that it would provide establishing connection over local are network; see Richter col. 6, line 10-15.

Regarding Claims 36 and 53, Sainton discloses the communication network supports the established of voice calls by the at least one portable terminal via the wired network (see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25).

Regarding Claims 37 and 54, Sainton discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25). Richter also discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see FIG. 5; see col. 5, line 50 to col. 6, line 56).

Regarding Claims 38 and 55, Sainton discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see FIG. 1A-B; col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; data packets carry actual data traffic, not the management of voice calls which is related to a voice call). Richter also discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see

FIG. 7A, text/graphics data source 706 are transmitted unrelated to audio data; see col. 7, line 20-35).

Regarding Claim 56, Sainton discloses wherein the designated one of the at least one network interface is designated based upon information received via the wireless transceiver (see FIG. 1A, a combined wireless transceiver system of 2,4 selects/designates one of voice of data interface according to the information received (from the network) via the combined wireless transceiver system; see col. 6, line 20-67). Also, Richter disclose the designated one of the at least one network interface is designated (see FIG. 7A, selecting/designation one of the audio/video/text interface) based upon information received via the transceiver (see FIG. 4, according to the request/information received from input/out network interface of connection stream 30; see col. 6, line 9-30,44-56).

Regarding Claim 57, Sainton discloses wherein the designated one of the at least one network interface is designated based upon information received via the network interface (see FIG. 1A, a combined wireless transceiver system of 2,4 selects/designates one of voice of data interface according to the information received (from the network) via the combined wireless transceiver system; see col. 6, line 20-67). Also, Richter disclose the designated one of the at least one network interface is designated (see FIG. 7A, selecting/designation one of the audio/video/text interface) based upon information received via the transceiver (see FIG. 4, according to the request/information received from input/out network interface of connection stream 30; see col. 6, line 9-30,44-56).

Regarding Claim 66, Sainton discloses the contentents of each digital voice packet transmitted wirelessly by a communication deice of a first party as set forth above in claim 58

above. Establishing an end-to-end connection between caller and callee stations is well known in the art of communication. In particular, Richter further discloses wherein the contents of each digital voice packet transmitted by a communication device of a first party (see FIG. 5, caller 1) is received in a digital voice packet (see FIG. 6, audio packet) by a destination party (see FIG. 5, caller 2; see col. 7, line 1-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide end to end connection between two users, as taught by Richter in the system of Sainton, for the same motivation as set forth above in claim 58.

Regarding Claims 69 and 70, Sainton discloses the at least one wireless receiver and the at least one wireless transmitter, wherein the at least one wireless receiver and the at least one wireless transmitter comprises a signal transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities); see col. 6, line 20-62.

Regarding Claims 71 and 72, Sainton discloses wherein the wireless communication circuitry comprises at least one transceiver, wherein the at least one transceiver comprises a single transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities); see col. 6, line 20-62.

11. Claims 23,24,40,41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Richter, as applied to claims 22 and 39 above, and further in view of Cripps (US005838730A).

Regarding Claims 23 and 40, neither Sainton nor Richter explicitly discloses a frequency of approximately 2.4 gigahertz. However, using 2.4 GHz frequency hopping is well known in the art as defined by FCC. In particular, Cripps discloses wherein the wireless packet network communicates at a frequency of approximately 2.4 gigahertz (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 2.4 GHz, as taught by Cripps, in the combined system of Sainton and Richter, so that it would provide a transmitter/receiver in accordance with FCC rules for 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

Regarding Claims 24 and 41, neither Sainton nor Richter explicitly discloses a frequency hopping spread spectrum technique. However, using frequency hopping spread spectrum techniques is well known in the art. In particular, However, Cripps discloses wherein the wireless packet network communicates frequency hopping spectrum technique (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide frequency hopping spread spectrum 2.4 GHz, as taught by Cripps, in the combined system of Sainton and Richter, so that it would provide a transmitter/receiver in accordance with FCC rules to support frequency hopping spread spectrum 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

12. Claims 25 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Richter, as applied to claims 22 and 39 above, and further in view of Honing (US005481533A).

Regarding Claims 25 and 42, neither Sainton nor Richter explicitly discloses a direct sequence spread spectrum technique. However, using direct sequence spread spectrum technique is well known in the art. In particular, Honing discloses wherein the wireless packet network communicates using a direct sequence spread spectrum technique (abstract; see col. 2, line 34-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide direct sequence spread spectrum technique, as taught by Honing, in the combined system of Sainton and Richter, so that it would suppress interference; see Honing col. 2, line 38, line 38-40.

13. Claims 26,27,30-32,43,44,47-49,59-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Richter, as applied to claims 22 and 39 above, and further in view of Perkins (US005159592A).

Regarding Claims 26,27,43,44, and 59-62, neither Sainton nor Richter explicitly discloses a packet Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wireless packet network comprising communication device (see FIG. 2, Mobile Unit MU 10) and the access device (see FIG. 1, a combined system of Header station HS 12 and gateway 16) uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 4, line

10-20; see col. 7, line 35-56; col. 8, line 30-45; mobile unit 10 and access gateway utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP, as taught by Perkins, in the combined system of Sainton and Richter, so that it would provide wireless network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

Regarding Claims 30-32 and 47-49, neither Sainton nor Richter explicitly disclose the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 3, line 55-64; col. 4, line 10 to col. 5, line 60; see col. 7, line 5-67; col. 8, line 45-67; Header station couples to a wired packet network utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP in wire network, as taught by Perkins, in the combined system of Sainton and Richter, so that it would provide wireless migration users to a network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

14. Claims 34,51, 52,64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Richter, as applied to claims 22 and 39 above, and further in view of Weaver (US005956673A).

Regarding Claims 34,51, 52 and 64, the combined system of Sainton and Richter discloses a network interface to a wired network as described above in claims 22, 39 and 58. The combined system of Sainton and Richter wherein the network interface communicates via the wired network in digital form (see Sainton col. 21, line 20-36; see Richter col. 6, line 10-15)

Neither Sainton nor Richter explicitly discloses a conventional switched telephone network. However, having a conventional switched telephone network is well known in the art. In particular, Weaver discloses a network comprises a conventional switched telephone network (see FIG. 2. PSTN 40), wherein the network interface communicates via the wired network in digital form (see FIG. 1, BS's local vocoder 35 communicates via PSTN in PCM 210 form; see col. 3, line 28 to col. 4, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PSTN, as taught by Weaver, in the combined system of Sainton and Richter, so that it would enable the system to route the PCM over existing/conventional PSTN, and it would avoid the tandem vocoding operation; see Weaver col. 1, line 60-67; see col. 2, line 15-20.

Regarding Claim 65, the combined system of Sainton, Richter and Weaver discloses all claimed limitation as set forth above in claim 64. Weaver discloses wherein the network interface is compatible with a conventional analog loop connection (see FIG. 2, network interface connecting with PSTN 40; thus, it is clear that PSTN utilizes a conventional analog local loop connection; see col. 3, line 28 to col. 4, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PSTN's analog local loop connection, as taught by Weaver, in

the combined system of Sainton and Richter, for the same motivation as set forth above in claim 64.

15. Claim 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Richter, as applied to claim 58 above, and further in view of Callon (US005251205A).

Regarding Claim 67, the combined system of Sainton and Richter discloses routing as described above in claim 67. Richter discloses a plurality of access devices (see FIG. 5, callers 1-2; see col. 6, line 30-57).

Neither Sainton nor Richter explicitly disclose based upon a cost of use of a communication path. However, using a least cost route/path is well known in the art. In particular, Callon discloses wherein the routing is based upon a cost of use of communication path (see FIG. 5A, 8A, 10A; cost; see col. 13, line 14-24;see col. 21, line 21 to col. 22, line 67; also see FIG. 12-13, col. 18-19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing base upon cost, as taught by Callon, in the combined system of Sainton and Richter, so that it would help to share network traffic loads between paths; see Callon col. 21, line 50-60.

16. Claim 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Richter, as applied to claim 58 above, and further in view of Reece (US005915214A).

Regarding Claim 68, the combined system of Sainton and Richter discloses routing as described above in claim 58. Sainton discloses wherein a user is prompted to select information

received by the communication device (see col. 13, line 5-25; user is prompted with information).

Neither Sainton nor Richter explicitly discloses alternate routing. However, user selection alternate routing based upon cost of the service provider is well known in the art. In particular, Reece discloses a user is prompted to select a routing alternative using routing information received by the communication unit (see FIG. 6, step 640,650,651,661,660,670; see FIG. 7-10; user is prompted with the provider information/cost to select a routing/switch different/alternative using routing/switching information received at the terminal; see col. 12, line 60 to col. 14, line 67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide user selection of alternate routing, as taught by Callon, in the combined system of Sainton and Richter, so that it would allow user to select a different/alternative, lower cost provider to complete the call; see Reece col. 3, line 19-65.

Response to Arguments

17. Applicant's arguments filed 3-6-07 have been fully considered but they are not persuasive.

Regarding claims 22-88, the applicant argued that, "...Berken fails to teach, suggest or discloses... "wherein digital voice packets wirelessly...communication network" as recited in claim 22, "wherein the packet comprising...communication network" as recited in claim 39, "wherein digital voice packets wirelessly...communication network" as recited in claims 58 and 73...the text cited in the office action suggests correspondence between the "destination information used for routing" and the control time slot and/or packet header.... there is no valid

basis for alleging such a correspondence...control time slot of Berken does not carry digital voice packets...nor does it carry packets comprising digital representation of sounds... "circuit switched path" taught by Berken is fundamentally different from and fails to anticipate use of digital voice packets...Berken fails to teach or suggest "digital voice packet/digital voice data packet"..." in page 14-20.

In response to applicant's argument, the examiner respectfully disagrees with the argument above since the combined system of Berken and Richter discloses the claimed invention.

Berken discloses wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (**see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot**) the digital voice packets through the communication network (**see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information routing/forwarding/switching information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN**). Richter teaches wherein digital voice packets comprise destination information used for routing (**see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20**) the digital voice packets through the communication network (**see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56**).

Moreover, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. It is so well known in the art that a radio control/header contains destination information for routing through the communication network" as one can evident from the following prior arts:

Hershey (US005481539A)- FIG. 4, Destination ID and data field in the radio frame and data; see entire document.

Harrisson (US 5,068,916)- FIG. 3, Destination address 48b and data field 48e in the radio frame; see entire document.

Berry (US 5,758,256)- voice packet comprising destination information (i.e. message type, sequence number) and data field; see col. 5, line 64 to col. 6, line 9.

The following prior arts recite the well known and establish concept of **a packet/frame header comprises destination information for routing through the communication network.**

Fischer (US005502726A)- routing a packet header with destination address from one node to the other over a network; entire document

Cerna (US005444707A)- embedding destination information within a header portion of a voice information packet; see claim 4 and 5.

Agrawal (US 4,493,021)- FIG. 2, destination address (DA) in the packet header and data block; see entire document.

Kline (US006157653A)- FIG. 3, a voice packet with header 302 with connection identifier and sequence number 306 used routing/switching over the network and a payload 304 with voice data- see entire document.

In response to argument on control time slot not of Berken, examiner is not equating control packet to voice packet as argued by the application. Examiner is equating a frame that contains a control time slot and voice packet time slot (see Berken FIG. 2-3) to applicant's voice packet that comprises control information for routing. Or, a voice packet time slot contains packet header (see Berken FIG. 4) which also contains control information for routing/switching voice packets to applicant's voice packet that comprises control information for routing. Thus, in either scenario Berken clearly discloses the claimed invention.

In response to argument on circuit switch path, first it is noted that the features upon which applicant relies (i.e., time slots, frames, circuit switch path, or specific type of path) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Second, Berken discloses a "circuit switch path" (i.e. the path the carries the voice) clearly routes the voice packet over the radio network as set forth in the rejection above. Thus, the applicant's argument on Berken's circuit switch path that allegedly fails to anticipate the use of voice packet is clearly an error since "circuit switch" or "voice switch" path clearly switches the voice packet.

Regarding claims 22-88, the applicant argued that, "...Sainton fails to teach, suggest or discloses ... "wherein digital voice packets wirelessly...communication network" as recited in claim 22, "wherein the packet comprising...communication network" as recited in claim 39, "wherein digital voice packets wirelessly...communication network" as recited in claims 58 and 73...make no mention of destination information used to reroute the packets..." in pages 20-29.

In response to applicant's argument, the examiner respectfully disagrees with the argument above since the combined system of Sainton and Richter discloses the claimed invention.

Sainton discloses wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing the digital voice packets through the communication network (**see col. 8, line 25 to col. 9, line 25; digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular telephone system**). Richter teaches wherein digital voice packets comprise destination information used for routing (**see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20**) the digital voice packets through the communication network (**see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56**).

In response to arguments on Drakopoulos on pages 20-29, the argument is moot since the Drakopoulos is no longer applied in this rejection.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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5-3-07

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